

Abstract

Title: DSM Analysis of Support of Disciplines in Product Development

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DSM analysis methods are applied to optimize processes which provide support disciplines in product development related to unmanned planetary explorations. The term "product" is interpreted in its broadest context to include development and operation of spacecraft, lander, rover, or science instruments, and collection as well as retrieval of scientific data - in effect, all aspects pertaining to a typical unmanned mission are considered. Both during development and mission operations & data analysis, there are a number of support disciplines which are necessary for overall success. These disciplines are applicable at all levels of a "product breakdown structure" (PBS). The DSM analysis to be presented is directed at optimizing product development processes (numbering less than 30) that provide such support disciplines at at least two levels of the PBS. The results of the analysis shed light on the extent of interaction between the involved processes and serve to identify a subset as integrating processes.